

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 to 13: CANCELED

14. NEW

Device for determining flow parameters, particularly the temperature, the flow velocity, the flow resistance and its change, in a stream of fluid to be monitored, particularly in smoke and gas intake detectors, having a thermoelectric air stream sensor (1) that is operated in a constant temperature mode, a thermoelectric temperature sensor (2), and a regulation circuit (3) for setting an excess temperature  $\Delta T$  at the air stream sensor (1), whereby

the regulation circuit (3) implemented in a microprocessor (4) contains a regulation algorithm, by way of which the excess temperature  $\Delta T$  at the air stream sensor (1) is kept constant,

wherein

the microprocessor (4) furthermore comprises an evaluation algorithm for recognizing small, sudden volume stream changes of the fluid stream, which are not based on disruptive ambient influences and do not proceed gradually.

15. NEW

Device according to Claim 14,

wherein

the evaluation algorithm is furthermore configured for calculating flow parameters on the basis of the electric heating power  $P$  of the air stream sensor (1), particularly for

calculating the mass stream  $N$ , the flow velocity  $w$ , the volume stream  $V$ , and the flow resistance  $F_w$  of an intake pipe system (13), and the temperature  $T$  of the fluid stream.

16. NEW

Device according to claim 14,  
wherein

the evaluation algorithm includes the compensation of a temperature-dependent and/or pressure-dependent density change of the fluid stream.

17. NEW

Device according to claim 14,  
wherein

the microprocessor (4) contains a memory for storing starting values of the flow parameters, for calculating status changes in the flow parameters in the evaluation algorithm.

18. NEW

Method for operating a device according to claim 14,  
wherein

the air stream sensor (1) is increased to a peak temperature value for a short period of time.

19. NEW

Method according to claim 18,  
wherein  
the temperature is 500°C.

20. NEW

Method for determining flow parameters, particularly the temperature  $T$ , the flow velocity  $w$ , and its change  $\Delta w$ , in a fluid

stream to be monitored, particularly in smoke and gas intake detectors, having the following method steps:

a) Determination of the fluid temperature  $T$  by means of a thermoelectric temperature sensor (2);

b) Regulation of the constant excess temperature  $\Delta T$  set at a thermoelectric air stream sensor (1), operated in constant temperature mode, as a function of the fluid temperature  $T$ ;

c) Determination of the amount of heat  $Q$  removed from the thermoelectric air stream sensor (1);

d) Calculation of flow parameters, particularly the temperature  $T$ , the flow velocity  $w$ , the flow resistance  $F_w$  its change  $\Delta F_w$ , on the basis of the amount of heat  $Q$  removed, by means of an evaluation algorithm implemented in the microprocessor (4); and

e) determination of time changes, particularly small, sudden volume stream changes, of the flow parameters determined under point d), which are not based on disturbing environmental influences and do not happen slowly.

21. NEW

Method according to claim 20, having the following additional method steps after method step d):

f) Compensation of the temperature-dependent and/or pressure-dependent fluid density change at the flow parameters determined under method step d).

22. NEW

Aspirative fire recognition device and/or oxygen measurement device, which constantly takes samples of space air or equipment cooling air from a space or piece of equipment (12) to be monitored, and feeds them to a detector (8), via a pipeline system (13), for detecting a fire characteristic value and/or other gases, particularly oxygen,

comprising

a device for determining flow parameters according to claim 14.

23. NEW

Aspirative fire recognition device and/or oxygen measurement device according to claim 22,

wherein

the air stream sensor (1) and/or the temperature sensor (2) are integrated into the detector (8), particularly in the center of the air entry channel (9) of the detector (8).

24. NEW

Device according to claim 22,

wherein

the air stream sensor (1) is disposed in a position in the air entry channel (9) of the detector (8) that is narrowed in cross-section.